

MILITARY SPECIFICATION

CONNECTORS, RECEPTACLE, ELECTRICAL  
WATERPROOF (SHELL SIZE 20, FEMALE INSERTS)

1. SCOPE

1.1 Scope. - This specification covers the detail requirements for the following types of shell-size 20, waterproof, electrical-receptacle connectors with female inserts:

UW2020FA00  
UW2020FB00

1.2 Ratings. - Connectors covered by this specification shall have the electrical ratings specified in table 1.

Table 1 - Electrical ratings

Connector type	Limiting operating voltage (sea level)		Nominal current
	Ac	Dc	Amperes
UW2020FA00	900	1,250	41
UW2020FB00	900	1,250	22

2. APPLICABLE DOCUMENTS

2.1 The following specifications, of the issue in effect on date of invitation for bids, form a part of this specification:

## SPECIFICATIONS

### FEDERAL

QQ-B-613	Brass, Leaded and Non-Leaded; Plate, Rolled Bar, Sheet and Strip.
QQ-P-416	Plating, Cadmium (Electrodeposited).

### MILITARY

MIL-C-12520	Connectors, Plug and Receptacle (Electrical, Waterproof); and Accessories; General Specification for.
MIL-C-12520/17	Connectors, Plug, Electrical, Waterproof (Cathedral Shape, Shell Size 20, Male Inserts).
MIL-C-12520/6A	Connectors, Plug, Electrical, Waterproof (Round Shape, Shell Size 20, Male Inserts).

(Copies of specifications required by contractors in connection with specific procurement functions should be obtained from the procuring agency or as directed by the contracting officer.)

## 3. REQUIREMENTS

3.1 Requirements.- Requirements shall be in accordance with Specification MIL-C-12520, and as specified herein.

3.2 Design and construction.- Connectors shall be of the design, construction, and physical dimensions specified on figure 1.

3.2.1 Mounting nut.- The mounting nut shall be of the dimensions specified on figure 2. Material shall be brass conforming to Specification QQ-B-613, and shall be cadmium plated conforming to class 1, type II, of Specification QQ-P-416. The resulting finish shall be olive drab in color.

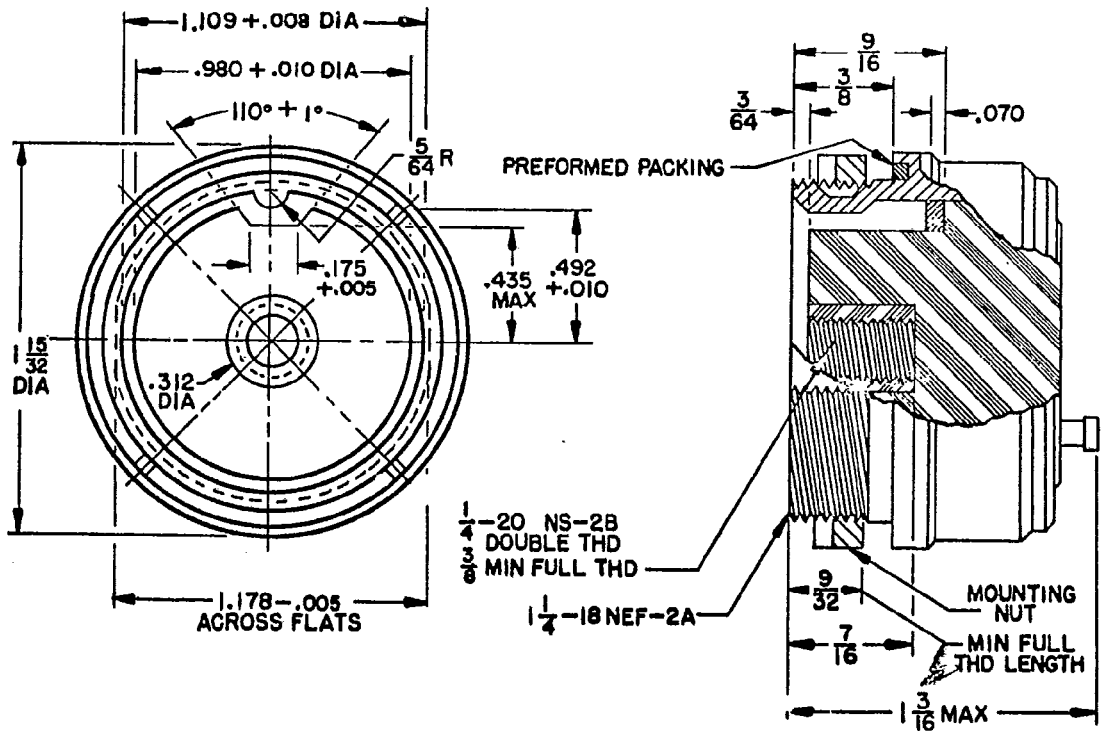
3.3 Voltage drop.- The voltage drop shall not exceed 20 millivolts for insert-arrangement A or 21 millivolts for insert-arrangement B. (See 4.4).

## 4. QUALITY ASSURANCE PROVISIONS

4.1 Sampling and inspection.- Sampling and inspection shall be in accordance with Specification MIL-C-12520, and as specified herein.

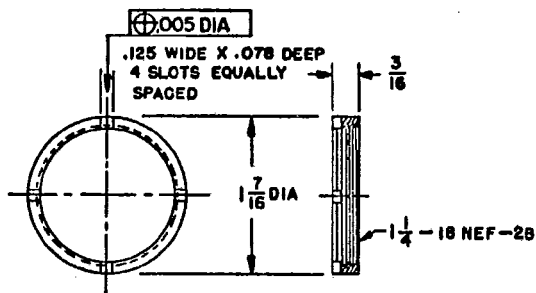
4.2 Test and mating plugs.- The test and mating plugs shall be in accordance with the applicable types covered by Specification MIL-C-12520/17 or MIL-C-12520/6A.

4.3 Dielectric withstanding voltage.- Connectors shall be subjected to a test potential of 2,800 volts root mean square (rms).



1. All dimensions in inches.
2. Unless otherwise specified, tolerances are  $\pm 1/64$  on fractions and  $\pm .005$  on decimals.

FIGURE 1. Receptacle shell and insert dimensions



1. All dimensions in inches.
2. Unless otherwise specified, tolerances are  $\pm 1/64$  on fractions and  $\pm .005$  on decimals.

FIGURE 2. Mounting nut dimensions

4.4 Voltage drop (see 3.3).- The test current for connectors shall be 35 amperes dc for insert-arrangement A, and 20 amperes dc for insert-arrangement B.

## 5. PREPARATION FOR DELIVERY

5.1 Preparation for delivery shall be in accordance with Specification MIL-C-12520.

## 6. NOTES

6.1 Notes.- In addition to the notes specified herein, the notes specified in Specification MIL-C-12520 are applicable to this specification.

6.2 Mating plug connectors.- Mating plug connectors are in accordance with Specifications MIL-C-12520/17 and MIL-C-12520/6A.

6.2.1 Cover and chain assemblies.- Cover and chain assemblies are in accordance with style 1X of Specification MIL-C-12520/12A "Cover and Chain Assemblies (External Threads, for Use on Waterproof Connectors)".

NOTICE: When Government drawings, specifications, or other data are used for any purpose other than in connection with a definitely related Government procurement operation, the United States Government thereby incurs no responsibility nor any obligation whatsoever; and the fact that the Government may have formulated, furnished, or in any way supplied the said drawings, specifications, or other data is not to be regarded by implication or otherwise as in any manner licensing the holder or any other person or corporation, or conveying any rights or permission to manufacture, use, or sell any patented invention that may in any way be related thereto.

CUSTODIAN

EL

Preparing activity

EL

Project Nr. 5935-A141